

REMARKS

This is in full and timely response to the above-identified Office Action. The above listing of the claims replaces all prior versions, and listings, of claims in the application. Reexamination and reconsideration in light of the proposed amendments and the following remarks are respectfully requested.

Claim Amendments

In this response, claims 1, 2, 5, 12 and 16 have been amended to overcome the objections and the rejections under 35 USC § 112. The amendments further clarify the claimed subject matter by converting the limitations held to be a method of forming the mixture into structure. For example, claim 1 now calls for a thermally decomposed getter precursor, thus rendering this limitation germane to the examination of this claim. Claims 5 and 16 respectively call for the sintered material to comprise a thermal decomposition of a soluble precursor . . . , thus rendering the subject matter of both of these claims germane to the invention.

Rejections under 35 USC § 102

The rejection of claims 12-16 under 35 USC § 102(b) as being anticipated by Kaduk et al. is respectfully traversed. In this Office action the Examiner has stated (on page 7) that Kaduk et al. discloses a single light transmissive and UV reflective layer in the form of undercoat 11. The Examiner has further stated that the "other" (viz., second) layer is different in that it only reflects visible light.

In this response, claim 12 has been amended to call for a single reflecting layer via the removal of the limitation as to what is reflected per se. By the Examiner's admission there are two reflective layers in Kaduk et al. Thus, a claim which calls for single reflective layer is novel in light of the two layer arrangement of Kaduk et al.

Rejections under 35 USC § 103

The rejection of claims 1-11 under 35 USC § 103(a) as being unpatentable over Trushell in view of Kaduk et al. is respectfully traversed.

In this rejection it is admitted that Trushell does not disclose a getter material mixed with the UV reflective oxidic material. To overcome this shortcoming, Kaduk et al. is cited as disclosing a UV reflective layer which also contains a getter material such as MgO. It is then asserted that the hypothetical person of ordinary skill would be led to mix a getter material in the undercoat layer of Trushell to increase the brightness of the lamp and also reduce the non-uniform darkening as the lamp ages.

This rejection is untenable in that it selectively transfers only a portion of the teachings of Kaduk et al. into the Trushell arrangement and completely ignores that basic teachings of Kaduk et al. More specially column 4, lines 51-59 of Kaduk et al. it is disclosed that:

While it is not fully understood how the invention functions to improve lamp performance, it is believed that the undercoat may have a gettering action on the gas fill in the lamp, and also improves reflectivity by **reflecting some of the light** which otherwise would escape through **the TiO₂ reflector coating** (which is not a perfect reflector), and also tends to reduce mercury deposition in the phosphor and on the **TiO₂ reflector coating**. (Emphasis added)

Thus, it is a combination of the TiO₂ layer (which reflects light) with the undercoat (which also reflects some light) which is the pith of the Kaduk et al. arrangement and which is believed to be the basis of the improved reflectivity provided by the Kaduk et al. arrangement. Thus, a transfer of teachings from Kaduk et al. to Trushell without the inclusion of the TiO₂ layer would amount to a violation of the basic intention of Kaduk et al. and therefore would not be made without clear teachings to omit the TiO₂ layer .

It must be appreciated that in order to establish a *prima facie* case of obviousness, it is necessary to show that the hypothetical person of ordinary skill would, without any knowledge of the claimed subject matter and without any inventive activity,

be led to the claimed subject matter given the guidance of the cited references when each is fully considered as statutorily required.

As noted above, the guidance of Kaduk et al. would induce the hypothetical person of ordinary skill to strongly consider the TiO₂ layer as part and parcel of the teachings of Kaduk et al. and thus demand that the TiO₂ layer be transferred along with the teachings of the getter material. However, claim 1 is set forth in partially closed format and is therefore such that the introduction of the TiO₂ layer would violate the requirement that anything in addition to the recited materials be such as to not have any material effect on the novel characteristics of the claimed invention. Clearly, the presence of the TiO₂ layer and the reflective properties associated therewith would materially effect the properties of the electric lamp which is being claimed. The TiO₂ layer must therefore be excluded from the claimed combination.

This exclusion of course renders it impossible for an accurate transfer of teachings from Kaduk et al. to those of the Trushell reference.

An additional inhibition to combination resides in that Kaduk et al. pertains to an aperture-type fluorescent reprographic lamp wherein an elongate clear area or aperture 13 is scraped out through the various layers which are coated onto the interior of the tube. Attention is called to column 3, lines 46-56, wherein it is set forth that:

The phosphor **12**, which may consist of zinc orthosilicate Zn₂SiO₄, is next applied as a suspension in a solution of nitrocellulose in butyl acetate which is drawn up into the bulb and allowed to drain out. At this stage, the **clear area of aperture 13 is scraped out in the desired width**. The scraping removes the relatively thick powdery reflective layer **10** of TiO₂, the undercoat **11**, and the phosphor layer **12**, but the clear protective layer **9** of TiO₂ which resulted from the hydrolysis of tetrabutyl titanate is very adherent and is not affected. Examples of other phosphors that have been found suitable are MgAl gallate, or cool white halophosphate; many other phosphors can be used. The

bulb is then lehrd at a temperature of about 550° to 600°C for 3 to 5 minutes to decompose and drive out the binder of the phosphor **12** and its undercoat **11**. Instead of applying the coatings over the entire periphery and then scraping, **an alternative method is to introduce a pool of suspension** of the desired coating in a horizontally supported tube which is **then rocked back and fourth** to achieve the desired angular width of reflective coating, followed by drying and lehring, as taught in U.S. Pat. No. 2,892,440-Fulton et al. (Emphasis added)

It will thus be appreciated that it would be also necessary to form an aperture of the nature used in Kaduk et al. in the Trushell arrangement if the teachings of Kaduk et al. were to be accurately transferred to those of Trushell. Inasmuch as Trushell is not directed to a aperture-type fluorescent reprographic type lamp, it is submitted that the hypothetical person of ordinary skill would not be motivated, at least for this reason, to consider a transfer of any teachings associated with Kaduk et al. to Trushell.

Newly added Claims

New claims are added in this response. Claims 21 and 22 respectively depend from claims 1 and 12, and call for the absence of apertures in the layers which are formed on the inner surface of the lamp envelope. Support for this claiming is found in the specification and figure taken as a whole. Further, the disclosed method of making the lamp supports the layers being formed to be continuous and aperture free. The new claims are patentable in that they call for subject matter which is neither disclosed nor rendered obvious by the disclosures of the cited references.

Claims 23 and 24 respectively depend from claims 1 and 12 and call for the single reflective layer is disposed directly on the inner surface of the lamp envelope. Support for this claiming is found in the specification and figure taken as a whole. Claims 23 and 24 are patentable in that they call for subject matter which is neither disclosed nor rendered obvious by the disclosures of the cited references.

Conclusion

It is respectfully submitted that all of the pending product claims are patentable over the cited reference. The withdrawn process claims are seen to contain all of the necessary corresponding limitations and thus rejoinder of these claims is again requested in accordance with *In re Ochiai*, 71 F.3d 1565, 37 USPQ2d 1127 (Fed. Cir. 1995) and *In re Brouwer*, 77 F.3d 422, 37 USPQ2d 1663 (Fed. Cir. 1996).

Respectfully submitted,

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